

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-3 and 5-6 are presently active in this case, Claims 1, 3, and 6 having been amended and Claim 4 canceled by the present amendment, and Claims 7-10 having been withdrawn from consideration as directed to a non-elected invention.

In the outstanding Official Action, Claim 4 was rejected under 35 U.S.C. 112, second paragraph, as being indefinite; Claims 1-6 were rejected under 35 U.S.C. 102(b) as being anticipated by Fujiki et al. (US 6,194,228, hereinafter called "Fujiki"); and Claims 1-6 were rejected under 35 U.S.C. 102(e) as being anticipated by Sun et al. (US 6,495,413, hereinafter called "Sun").

First, in view of the cancellation of Claim 4 by the present amendment, the outstanding rejection under 35 USC 112, 2nd para., is moot

In light of the outstanding rejection on the merits, Claim 1 has been amended to clarify the claimed invention and thereby more clearly patentably define over the cited prior art. Support for the changes to Claim 1 is found in Claim 3 and, for example, at page 6, lines 15-24 of the specification. No new matter has been added.

Briefly recapitulating, Claim 1 is directed to a method of manufacturing a semiconductor device equipped with a capacitor in which a dielectric film is used, wherein a complex oxide is used as a mask material when the dielectric film is subjected to reactive ion etching, and the mask material, which is in direct contact with the dielectric film, is used as an upper electrode of the capacitor after the reactive ion etching is performed.

As noted in the outstanding Official Action, Fujiki, at column 5, lines 21-27 describes that top Pt film 8 and an SRO film, which are formed through a mask having through holes, are

covered with a resist pattern, as a mask material, and that PZT film 6 is subjected to wet etching, using a chemical solution. On the other hand, as claimed, a complex oxide is directly covered on a dielectric film as a mask material, and the dielectric film is subjected to reactive ion etching (i.e. dry etching). As described in Applicants' specification, a complex oxide, such as SRO (SrRuO_3), is used as a mask material because such material has a relatively low etching rate in reactive ion etching, compared to a noble metal electrode material, such as Pt or Ir. Furthermore, Fujiki merely describes performing wet etching using a resist pattern as a mask material. Fujiki does not describe performing reactive ion etching, as claimed. Therefore, the claimed invention is different from Fujiki from the standpoint of the masking material used, that the mask material used for etching is also used as an upper electrode, and that a different type of etching is employed.

Sun discloses a method for fabricating integrated capacitors in forming a ferroelectric capacitor array for ferroelectric memory integrated circuits, describes that an SRO layer is in contact with an upper electrode film made of IrOx, and that the upper electrode film and a dielectric film are etched using the SRO as a mask material. In contrast, Claim 1 recites a complex oxide, such as SRO, is in direct contact with a dielectric film, and the dielectric film is etched using the complex oxide as a mask material. Further, with the present invention, the mask material, such as SRO, which has been used for etching, is used as an upper electrode. Accordingly, Sun is different from the claimed invention in that the SRO is not in direct contact with the dielectric film, and in that IrOx is used as an upper electrode, instead of using SRO as a single upper electrode.

Accordingly, from the above discussion, it is respectfully submitted that Sun does not cure the deficiencies of Fujiki, and that amended Claim 1 and Claims 2-3 and 5-6 dependent

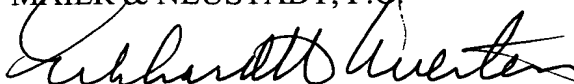
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therefrom, patentably define over the cited references whether these references are considered alone or in combination.

Consequently, in view of the present amendment and in light of the above comments, no further issues are believed to be outstanding, and the present application is believed to be in condition for allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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